

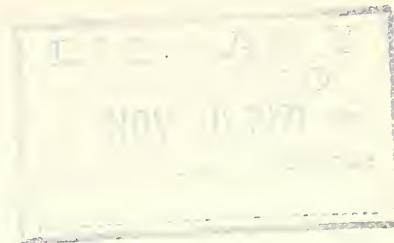
## **Historic, archived document**

Do not assume content reflects current scientific knowledge, policies, or practices.



THE EXTENSION HORTICULTURIST

February 1, 1921.  
-----



MEETING OF EXTENSION DIRECTORS OF THE 48 STATES  
Washington, D. C., February 1, 2, and 3, 1921.

\*\*\*\*\*  
\*  
\*  
\*       The horticultural extension forces of the various  
\* states and of the United States Department of Agriculture  
\* are exerting a powerful influence for the upbuilding of the  
\* commercial fruit and vegetable interests of the country.  
\* In order that the Office of Horticulture and Pomology of  
\* the United States Department of Agriculture may be of the  
\* greatest possible assistance to the extension workers in the  
\* states, the following outline of horticultural work conduct-  
\* ed by the Department is herein presented. Two extension spe-  
\* cialists, Prof. C. P. Close and Mr. W. R. Beattie are assign-  
\* ed to the duty of assisting the state forces in the exchange  
\* of information and the perfection of plans for carrying on  
\* the work. These men act as a connecting link, not only be-  
\* tween the investigational projects of this office and the  
\* states, but in picking up useful extension information from  
\* one state and carrying it to another. Moral - Don't tell  
\* them anything that you do not want known.  
\*  
\*  
\*\*\*\*\*

Office of Horticultural and Pomological Investigations  
and States Relations Service Cooperating.  
U. S. Department of Agriculture,  
Washington, D.C.



## Historical Sketch.

Pomological work in the United States Department of Agriculture was established in 1886 under Commissioner of Agriculture, Norman J. Coleman with Prof. H. E. Van Deman, formerly horticulturist at Manhattan, Kansas, in charge of the work. In 1893 Prof. S. B. Heiges succeeded Prof. Van Deman. Colonel G. B. Bracket occupied the position of pomologist from 1898 until his death in 1915 when the Division of Pomology was combined with Horticulture.

Horticultural work was established during the early days of the Department's history under Mr. William Saunders, who was in charge of the greenhouses and grounds of the Department. Prof. L. C. Corbett was brought into the work in 1901 and built up the Office of Horticultural Investigations, which continued as a separate division of the Bureau of Plant Industry until combined with the Division of Pomology in 1915.

As originally organized, Horticultural and Pomological Investigations included the storage and handling of fruits and vegetables, these now being placed under the Bureau of Markets. Peanuts and Irish potatoes, while more or less farm crops, are handled under the Office of Horticulture and Pomology.

Recently Messrs. C. P. Close and W. R. Beattie have been assigned the task of correlating horticultural information that has reached the extension stage and of carrying this information to the workers in the states. These two men not only carry information from the Department, but that which is picked up from the various states as well. The work in the 33 northern and western states is divided between Mr. Close and Mr. Beattie, while that of the 15 southern states is handled entirely by Mr. Beattie. The demands upon the time of these two men are so great that it is necessary for them to make appointments well in advance. While it is a physical impossibility for these two men to visit the individual states very often, a message in the form of this little publication entitled "The Extension Horticulturist," is being sent the state workers each month.

Fruit identification work was established at the very beginning of the pomological work in the Department. This line of work is being continued. Utilization of surplus fruits and vegetables is a line of work that has been recently established, the object being to determine the best methods of caring for surplus products through the manufacture of juices, marmalades, jams, canned goods and by dehydration. Very little of the information in this line has reached the demonstration stage, but it is being rapidly developed. Those lines of horticultural activity in the Department that have reached the stage where the results can without question be extended are included in the following pages. The work with Irish potatoes, sweet potatoes, peanuts, landscape gardening, home gardening, orchard practices, and commercial vegetable culture are most important in this connection.





## Potato Production.

Irish potato investigations and demonstrations are undoubtedly of the most far-reaching value to the extension forces of any line of work being conducted by this office. The object of the work is to increase acre yields and the quality of the potatoes produced, by extending the use of the best seed available. The plan of work is to test seed from various sources to determine the strain best suited for use in a given locality, then to plan for the extensive production and distribution of this seed. In Wisconsin in 1919 the use of the best seed, if applied all over the state, would have meant an increased production of 100%.

Prof. William Stuart is in charge of the project with Messrs. Wellington, Clark and Lombard as assistants. Three special potato stations are maintained by the Department and cooperative work is carried on with all states, and four Farmers' Bulletins are available.

- 533, "Good Seed Potatoes, How to Produce Them."
- 847, "Potato Storage and Storage Houses."
- 953, "Potato Culture Under Irrigation."
- 1064, "Production of Late or Main-Crop Potatoes."

## Sweet Potato Production.

While the production of sweet potatoes is limited mainly to the 15 southern states, there are areas in southern Indiana, Illinois, Missouri, Iowa and California where this industry is of great importance. It is only within recent years, however, that the sweet potato has begun to assume its proper place commercially. The object of the work in the Department is to increase the value of the sweet potato by reducing the commercial varieties to the smallest number consistent with regional requirements and by encouraging the use of types suited to specific purposes. The plan is to secure pure strains of disease free seed of the important commercial varieties and to provide small lots of propagating stock for the use of the state forces. A large variety collection of sweet potatoes is maintained by the Department and while it is not practicable to make a general distribution of these, through close cooperation with the state agencies the superior stocks and pure strains are being disseminated. While the commercial curing and storage of sweet potatoes is now handled largely by the Bureau of Markets, this office is continuing its work to determine the keeping qualities and adaptability under the direction of Mr. J. H. Beattie assisted by Mr. C. J. Hunn. Three publications are available, as follows:

- Farmers' Bulletin 970, "Sweet Potato Storage."
- Farmers' Bulletin 999, "Sweet Potato Growing."
- Farmers' Bulletin 1059, "Sweet Potato Diseases."

Considerable progress has also been made in the matter of developing strains, especially suited for stock feeding, also those adapted for canning and the making of syrup. From an extension standpoint, the Department recommends the planting of only one or at most two varieties in a given locality for marketing purposes, because this simplifies standardization and





marketing. We further recommend that extension workers discourage the construction or use of any storage house that does not conform to the plans and principles of the government house. Numerous failures have resulted from the use of the so called patented houses, and even where these houses have been a success, the cost of construction and operation have been so far in excess of that of the government houses as to render them impracticable.

### Peanuts.

Investigations with the peanut were started by the Office of Horticulture about 18 years ago and have been conducted along the line of variety and strain improvement from a commercial standpoint. The object has been to increase acre yields through the use of the best seed obtainable, also by improved cultural methods. It has been the aim to concentrate the efforts of the growers upon the varieties best suited to the local conditions under which they are working. Another phase of the work has been to encourage better methods of harvesting and curing the crop.

Peanuts have been employed to considerable extent in club work and their use for this purpose is fully recommended. While peanuts have suffered in common with other farm crops of the south so far as prices are concerned, it is believed that the crop is a good one for the extension forces of the southern states to encourage on a normal crop rotation basis.

Mr. J. H. Beattie is in charge of the work assisted by Mr. C. J. Hunn. The following publications are available for use by the extension forces:

"Farmers' Bulletin 1127, "Peanut Growing for Profit."  
"Farmers' Bulletin 751, "Peanut Oil."  
"Department Circular 128, "Peanut Butter."

### Farmstead Improvement.

Landscape work in connection with the improvement of the surroundings of the farm home, in order to make it more livable and more attractive, has found a ready acceptance among extension workers. Results are accomplished where major improvements are warranted by remodeling and relocating important buildings or by the moving of small ones. The work is conducted mainly, however, by relocating walks and drives and by the judicious use of suitable trees and shrubs, mainly those that grow naturally in the locality.

The work is done mainly through county home demonstration agents in the southern states, also sometimes through girls' and women's club leaders, instruction being given at their summer schools. Thus far the work in the northern states has been conducted primarily by the state forces, but arrangements are now being effected for putting on this work in cooperation with the county agents and the home demonstration agents wherever available. The plan is to conduct demonstrations where requested in two counties in a state, for the purpose of showing in each state what may be done.

With regard to the work accomplished it might be stated that the demon-



strations were started in the south under direction of the home demonstration agents in the spring of 1919 and during that year 29,975 yards were improved; 20,977 trees planted and 26,967 vines set out with 21 major projects in 7 southern states. The work is in charge of Mr. F. L. Mulford, assisted by Mr. B. Y. Morrison. It is not the plan to handle very many individual demonstrations, but simply to establish type demonstrations in each state. Three publications that apply to the work are available.

Farmers' Bulletin 1087, "Beautifying the Farmstead."  
Farmers' Bulletin 1171, "Growing Annual Flowering Plants."  
Farmers' Bulletin 750, "Roses for the Home."

#### Fruit and Vegetable Utilization.

The object of this line of work in the Department is to determine practicable methods of conserving surplus fruits and vegetables under home conditions, including drying, canning, juice making, etc. Very little of the work has reached the extension stage, but we have gone far enough into it to establish certain principles that serve as a guide in determining methods to be followed in extension work. For example, it has been found that the variety of fruit or vegetable has much to do with the quality of the prepared juice or of the dried or canned products. Apple juice can be clarified and sterilized without undue loss of flavor or quality and thus make an attractive and palatable beverage. Splendid results have been secured in blending of two or more varieties of apples both for sterilized cider and for vinegar. In the case of grapes it has been found that certain of our standard table varieties grown in the north will yield a very attractive clear juice under home methods of manufacture, while other varieties produce a juice that is cloudy and cannot be clarified, except by mechanical process.

In the canning of sweet potatoes the variety employed depends largely upon the purpose for which the product is to be used. If for pie purposes the Nancy Hall or Porto Rico types are best, but if the canned product is to be used for frying or baking, some variety of the yellow Jersey type is desirable. This information is being made available through departmental publications.

The work is under the direction of Dr. J. S. Caldwell with Mr. C. A. Magoon and Mr. C. W. Culpepper as associates. The utilization of Muscadine or other southern types of grapes is conducted at Willard, North Carolina, under the direction of Mr. Charles Dearing. This phase of utilization has grown out of a demand for a line of products that can be home manufactured and which will add to the cash income of the women and girls of the southern states. Utilization work is becoming more and more important in connection with girls' club activities. The following Farmers' Bulletins bearing upon utilization have been issued:

1075, "Unfermented Grape Juice - How to Make it."  
1033, "Muscadine Grape Paste."  
859, "Home Uses for Muscadine Grapes."  
758, "Muscadine Grape Syrup."  
984, "Farm and Home Drying of Fruits and Vegetables."  
903, "Commercial Evaporation and Drying of Fruits."

*Journal of Management Education* 30(6)p.789-804



## Fruit Production.

From an extension standpoint fruit production in general and orchard management in particular are of great importance. There is scarcely a state in the Union that does not have some form of fruit production problem or project. This office has pretty thoroughly covered the fruit production work with both general and regional publications as will be seen from the classified list of departmental bulletins. The assistance that the Department is prepared to render in fruit extension lines consists mainly in furnishing the state workers with suggestions and in correlating the work being done by the states. We have at the Arlington Experimental Farm a rather extensive variety collection of apples which are being used for comparison.

Recently Congress appropriated funds for work in connection with the securing of vigorous, disease free, fruit stocks upon which to grow standard varieties. This work will be conducted largely in cooperation with the nurserymen of the country. The work is in general charge of Prof. L. C. Corbett, but is directly supervised by Mr. H. P. Gould, Mr. G. M. Darrow, and Mr. C. F. Kinman as associates. Mr. L. B. Scott, who for the past year has been connected with the Bud Department of the California Citrus Fruit Growers Association, has been secured to take charge of this work.

## Fruit Identification Service.

Fruits for identification are received from practically all sections of the United States where fruits are grown. This is of great service to fruit growers who wish to label their fruit packages with the variety name as is required by state and Federal laws under certain conditions. Nursery stock does not always produce fruit true to label and the identification of these misfits is of great service to those who have orchards just coming into bearing. Orchards change ownership and the new owner wants to know what varieties he has. The experiment stations send their fruit puzzles for final solution, and hundreds of people throughout the country besides extension fruit specialists and county agents make constant use of this service.

The office has recently established a museum of wax models of varieties of fruits and has hundreds of water color paintings of fruits. These are all in natural size and color and are valuable aids in the identification work.

This work is growing and in order to avoid delay several typical specimens of each variety should be sent, together with information concerning the habit of growth of tree or plant producing each kind. This work is handled by Prof. C. P. Close and office assistants.





## Vegetable Production.

Several important problems in connection with the commercial production of vegetables are receiving attention. Prominent among these are the securing of superior strains of vegetable seeds that are adapted to definite localities. This work is also being undertaken by the workers in several of the states and has to a considerable degree reached the extension stage. Demonstrations in the proper use of fertilizers and of improved cultural methods are always in order and the Department is prepared to furnish the state workers with considerable information along this line. Work is also being conducted looking to the formation of a basis for establishing standards of variety and strains of vegetable seeds. This work is conducted in the testing gardens at the Arlington farm and in cooperation with state workers. A special line of demonstrations are being conducted on muck soils to determine the fertilizer and varietal requirements of these soils. Some of the results obtained in this work are available for extension. Mr. J. H. Beattie is in charge of the work. A large number of bulletins pertaining to vegetable problems have been issued. The titles of these can be found in the published list of Department bulletins.

## Home Gardens.

It has always been the policy of the Department to encourage the planting of farm home gardens. During the war period this work was extended to the cities in order to increase the food supply. At present the effort to encourage gardens, both on farms and in the towns, is being continued. This work is especially adapted for the activities of both the county agents and the home demonstration agents and is primarily an extension proposition. Several bulletins have been prepared, including one entitled "The City Home Garden," which is intended to meet the requirements of the gardener who is working a small piece of land.

## Fruit and Vegetable Storage.

A project with fruit and vegetable storage, the object of which is to determine the physiological changes of fruits and vegetables in storage is being conducted. This work includes storage and curing of citrus fruits, Bartlett pears, cherries, also the storage of nuts and vegetables, including potatoes. The results of this work have for the most part not yet reached the demonstration stage. The personnel of the work includes Dr. Lon A. Hawkins, Messrs. R. C. Wright, J. R. Magness, and G. F. Taylor, as associates.

## Nut Culture Investigations.

Nut culture investigations include work with pecans, almonds, Persian walnuts, filberts and other commercial types of nuts. The work is in charge of Mr. C. A. Reed and Mr. E. R. Lake. A number of departmental publications have been issued.

1. The first part of the document is a letter from the President of the United States to the Congress, dated January 3, 1862. It is a very long letter, and it contains a great deal of information about the state of the country at that time. The President talks about the war with Mexico, and about the relations between the United States and Great Britain. He also talks about the economy, and about the progress of the country. The letter is written in a very formal style, and it is very well organized. It is a very important document, and it is one of the most interesting letters that I have ever read.

2. The second part of the document is a letter from the Secretary of the Treasury to the President, dated January 10, 1862. It is a very short letter, and it contains a great deal of information about the state of the Treasury at that time. The Secretary talks about the amount of money that the Treasury has, and about the amount of money that it needs. He also talks about the progress of the Treasury, and about the relations between the Treasury and the other departments of the government. The letter is written in a very formal style, and it is very well organized. It is a very important document, and it is one of the most interesting letters that I have ever read.

3. The third part of the document is a letter from the Secretary of the Interior to the President, dated January 15, 1862. It is a very short letter, and it contains a great deal of information about the state of the Interior at that time. The Secretary talks about the amount of land that the Interior has, and about the amount of land that it needs. He also talks about the progress of the Interior, and about the relations between the Interior and the other departments of the government. The letter is written in a very formal style, and it is very well organized. It is a very important document, and it is one of the most interesting letters that I have ever read.

4. The fourth part of the document is a letter from the Secretary of the War to the President, dated January 20, 1862. It is a very short letter, and it contains a great deal of information about the state of the War at that time. The Secretary talks about the amount of soldiers that the War has, and about the amount of soldiers that it needs. He also talks about the progress of the War, and about the relations between the War and the other departments of the government. The letter is written in a very formal style, and it is very well organized. It is a very important document, and it is one of the most interesting letters that I have ever read.

## Viticultural Investigations.

Work with Vinifera or European grapes also with the native bunch grapes is conducted by Mr. George C. Busmann, assisted by Messrs. G. E. Verkes, E. Snyder and F. L. Busmann. This work is conducted mainly at Fresno, California and includes a study of the congeniality of Vinifera varieties to the different stock varieties also the introduction and testing of varieties not previously grown in this country. Investigations with the Muscadine type of grapes is conducted at Willard, North Carolina by Mr. Charles Dearing in cooperation with the State Department of Agriculture and Experiment Station.

## Bulb Investigations.

Great progress has been made in demonstrating the possibilities of growing commercial stocks of Easter Lily from seed in the middle latitudes and it is found that the culture of the Easter Lily is as simple as that of growing carnations. By intensive methods of cultivation certain of the Dutch bulbs can be successfully produced in the Pacific Northwest, also in Michigan and a limited area around Norfolk, Virginia. This work is in charge of Dr. David Griffiths.

The foregoing is a brief outline of the leading activities in which the workers of the Office of Horticulture and Pomology are engaged. Much of the work has reached the stage where it can be of use to the extension forces in the states and in order to make it available, Prof. Close and Mr. Beattie have been designated as the representatives of the office in extension work.

## Among Extension Workers.

Prof. A. B. McKay, Horticulturist of the Agricultural College of Mississippi, was found a few mornings ago working in his garden, but he willingly put away his tools and joined Mr. Beattie for a conference relative to extension work in Mississippi. Prof. McKay has been relieved of class room duties and is devoting his time mainly to landscape gardening and home improvement work. The general extension horticulture in Mississippi is handled by Mr. A. G. Smith, a graduate of Virginia Polytechnic Institute and Mr. W. P. James, who has recently come into the work from Indiana. The main lines of work are the promotion of home orchards, small fruits, home gardens, and commercial vegetable growing. Contacts are made primarily through the county agents, demonstrations being put on at such points as will best serve to extend the work.

Prof. McKay is working largely through the home demonstration agents in the improvement of rural school grounds, church properties, civic centers and farm homes. In the description of "A Day with the Home Demonstration Agent," he tells how he begins during the early morning by meeting the leaders of a country church and getting them started on the work of improving the grounds around the church, next he visited a school and talked to the children about the importance of improving their school grounds and then





showed how the work was to be done. Following the work at the school several homes were visited and the day completed by a lantern slide lecture in the school house at night.

In Alabama Prof. Starcher is supervising the general features of extension work, while Mr. Briggs is still campaigning for better methods of growing and storing sweet potatoes. The interest in fruit growing in the northern part of Alabama is increasing rapidly and a large number of small commercial orchards have been planted.

A visit to Prof. McHatton at Athens, Georgia, found him busy with class room and laboratory work, which at this time of the year is conducted mainly in the orchard and greenhouses. Mr. George H. Firor is serving as extension horticulturist, handling both fruits and vegetables. Home fruit work is under way in 10 counties, 6 to 10 demonstrations being located in each county. Great progress has been made in the matter of cleaning up home orchards, 70 or 80 spray pumps having been sold for this purpose in the counties where the work is started. Approximately 2,000,000 peach trees have been planted in 5 to 10 acre orchards in one section of Georgia during the past 5 years. One county agent during the past year ordered and distributed 2,000 trees for planting in home orchards.

In South Carolina, three men are devoting their entire time to horticultural extension. Mr. George P. Hoffman is supervising the work of the state as a whole but takes care of one section of 15 counties. Mr. Schiltter handles the work in the northwestern part of the state while Mr. Albert M. Musser, formerly from Pennsylvania State College, is handling the work in the third division of the state. These men handle both fruit and vegetable problems. Just at present there is a very keen interest in South Carolina in the planting of small commercial orchards of both apple and peach. The campaign for home orchards which was started some 3 or 4 years ago is beginning to bear fruit and the orchards that were first started are being given good attention.

Great interest centers in the use of standard fruits in boys' club work throughout the southern states. One county agent in Florida is now making plans to establish citrus fruit clubs and small fruit clubs are being organized in several sections.

At the last meeting of the Board of Visitors of the Virginia Polytechnic Institute, Prof. T. C. Johnson, Director of the Virginia Truck Experiment Station at Norfolk was appointed head of the vegetable garden work at the Blacksburg institution. This is along the same plan as is being followed in Massachusetts and Prof. Johnson will maintain his headquarters at Norfolk in the heart of the trucking district and will have one or two extension specialists working under his direction. He will have general supervision of the subject matter issued from the College, but the teaching will be left largely to the other members of the force located at the College. This is undoubtedly a good arrangement, as it gives the Norfolk trucking section more direct contact with the College.

1. The first part of the document is a letter from the President of the United States to the Congress, dated January 3, 1862. It is a very important document, as it contains the President's views on the state of the Union and the progress of the war.

2. The second part of the document is a report from the Secretary of the War Department, dated January 10, 1862. It contains a detailed account of the military operations of the Army during the year 1861, and the progress of the war.

3. The third part of the document is a report from the Secretary of the Navy Department, dated January 10, 1862. It contains a detailed account of the operations of the Navy during the year 1861, and the progress of the war.

4. The fourth part of the document is a report from the Secretary of the Department of the Interior, dated January 10, 1862. It contains a detailed account of the operations of the Department during the year 1861, and the progress of the war.

5. The fifth part of the document is a report from the Secretary of the Department of the Treasury, dated January 10, 1862. It contains a detailed account of the operations of the Department during the year 1861, and the progress of the war.

6. The sixth part of the document is a report from the Secretary of the Department of the State, dated January 10, 1862. It contains a detailed account of the operations of the Department during the year 1861, and the progress of the war.

## GARDEN GOLD.

"Garden Gold" is the title of a new one-reel film just released by the United States Department of Agriculture. This film shows how "John Jasper," a city man made ends meet by getting himself a garden and growing his own supply of fresh vegetables. The plot is laid in Washington and illustrates how the extension service cooperates with organizations in food production.

In view of the present condition of unemployment among industrial classes it is essential that thousands of these people be taught to become part producers of their own living. The film "Garden Gold" should be shown in every city in the land and copies can be supplied by the Department at actual cost of printing, which is \$40.00. Two weeks time is required in which to have a copy made. We will have two copies available about March 1st for loan purposes, but can only promise the use of these for one or two showings in any one state and recommend that special copies be ordered by the state extension forces. The copies are made by a New York film supply company on approval by the Department. Requests should be directed either to this office or to the office of Moving Picture Activities of the Department and the necessary authority will be furnished the film company to make the copy. Payment is made direct to the film company which should also be furnished with full shipping instructions.

W. R. Beattie,

Extension Horticulturist.

1. *Phragmites* (Common Reed)